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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: JOSE ALBERO ET AL. Docket No.: 01-294

Serial No.: 10/015,439 Examiner :

Filed : December 13, 2001 Art Unit :

For : MAIN PROPULSION ENGINE SYSTEM
INTEGRATED WITH SECONDARY POWER UNIT

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INFORMATION DISCLOSURE STATEMENT

Hon. Commissioner of Patents and Trademarks
United States Patent & Trademark Office
Washington, D.C. 20231

Dear Sir:

In compliance with Applicants' continuing duty of disclosure, the following U.S. Patents are brought to the Examiner's attention.

(1) U.S. Patent No. 2,704,434 to Schmitt;

(2) U.S. Patent No. 2,619,795 to Drake;

(3) U.S. Patent No. 4,357,796 to Ellis;

(4) U.S. Patent No. 2,601,194 to Whittle;

(5) U.S. Patent No. 2,968,920 to Wayne et al.;

(6) U.S. Patent No. 3,368,352 to Hewson;

(7) U.S. Patent No. 5,137,230 to Coffinberry; and

(8) U.S. Patent No. 5,490,645 to Woodhouse.

The foregoing references were cited in a corresponding PCT application within three months of the filing date of this submission.

The Schmitt patent relates to a dual set gas turbine power plant for aircraft. In this power plant, the air compressor is divided into two separate compressor units with each unit being driven by its own gas turbine unit.

The Drake patent relates to an aircraft booster jet power unit. The aircraft power plant comprises the combination of a main combustion gas turbine including an air compressor portion, a combustion chamber portion and a turbine portion connected to the compressor portion by a shaft and adapted to drive a propeller. The compressor portion has a compressor inlet between the compressor portion and the propeller. A power boost unit positioned at one side of and adjacent the combustion gas turbine and having an axis parallel to the axis of the shaft. The unit includes an auxiliary air inlet in the path of air discharged from the propeller. The auxiliary compressor receives air from the auxiliary inlet. The auxiliary combustion chamber receives air from the auxiliary compressor. A jet pipe for discharging heated air from the combustion chamber in the

same direction as the air from the propeller is provided, and the power plant further has means including disengageable clutch means for selectively connecting the auxiliary compressor to the shaft of the combustion gas turbine for rotation thereby.

The Ellis patent relates to a mixed flow, high bypass, gas turbofan engine that is small and compact. The engine has an axial length of approximately 18 inches, an air inlet of approximately 10 inches in diameter, an exhaust nozzle of approximately 6 inches in diameter. To reduce engine length, high pressure compressor diameter, a high pressure compressor is positioned in a location that is displaced from and is preferably parallel to the engine axis. A burner is similarly positioned on the other side of the engine axis. Only one turbine is used and a unique flow path is used. In addition, a heat exchanger of the regenerative type which includes a plurality of pipe diffusers is used. It is positioned in the hot exhaust flow of the single turbine to pre-heat the compressor air prior to entry into the burner. A gear shift may be used with the compressor to give better part-power performance.

The Whittle patent relates to a multiunit gas turbine power plant for aircraft propulsion. The aircraft jet propulsion power plant comprises a nacelle having a forward facing air entry and rearwardly facing gas exit in relation to the intended

direction of flight, a compressor in the entry for pressurizing the nacelle, a plurality of self-contained gas turbine power units arranged in circular symmetry about the axis of the compressor, each unit comprising a turbine, a compressor driven thereby and heating means connected to receive air from the compressor of the unit and to supply hot gas to the turbine of the unit. The power units are wholly enclosed by the nacelle so as to receive their entire air supply therefrom. The power plant further comprises means receiving power from the power units in common for driving the first compressor.

The Wayne patent relates to an engine mounting arrangement. A multiple engine mounting structure comprises first and second support members, structural means rigidly interconnecting the members in spaced relationship to each other, mounting members positioned adjacent to each of the support members for securing the mounting structure to the aircraft, the mounting members being constructed and arranged to permit relative movement between the aircraft and the mounting structure laterally and longitudinally, thereby to afford differential thermal expansion of the mounting structure relative to the aircraft, and means for mounting a plurality of engines upon the support members, the respective engines being rigidly secured by the mounting means to one of the support members and slidably supported by the remaining one of the support members to afford differential

thermal expansion of each engine relative to the mounting structure.

The Hewson patent relates to a by-pass gas turbine jet propulsion engine in which the by-pass stream passes through the low pressure turbine and the by-pass duct contains combustion equipment which may be inoperative or operative in conjunction with the main combustion equipment to provide a variable by-pass ratio effect. Variable nozzle guide vanes are provided upstream of the low pressure turbine. Afterburning may be provided in conjunction with this engine arrangement with little or no nozzle area variation.

The Coffinberry patent relates to an environmental control system for supplying aircraft or cabin air to an aircraft with a propulsive engine compressor bleed supply means and an ECS bleed air flow control means which includes an energy recovery means for using the unrequired or unused energy to pump boundary layer air from the surface of the aircraft, such as from the engine nacelle, and exhaust the air rearward of the engine to produce thrust, thus returning some of the unused energy to the propulsive engine.

The Woodhouse patent relates to an aircraft subsystem which provides the aircraft with all its electrical and conditioned air requirements without requiring the extraction of either shaft power and/or pressured air from the aircraft's main

engines. At the core of this subsystem are two rotating assemblies journaled on non-oil lubricated bearings to a housing. One assembly includes a cooling turbine, a starter/generator, a core compressor, and a high pressure stage of a two stage axial turbine, all mounted on a single shaft. A combustor is disposed between the core compressor and the turbine. The other assembly is comprised of the low pressure stage of the axial turbine coupled to a load compressor via a second shaft. The high pressure turbine stage and cooling turbine are sized to drive the core compressor and starter/generator which provides all the aircraft's electrical needs both on the ground and inflight. The low pressure turbine stage drives the load compressor, which produces pressurized air that is conditioned through heat exchange components and then expanded and cooled across the cooling turbine before being delivered to the aircraft cabin.

A copy of each of the above-mentioned patents is enclosed herewith along with a listing on Form PTO-1449.

None of the above-mentioned patents are believed to negate the patentability of the present invention.

If any charges are required in connection with this submission, it is requested that they be charged to Deposit Account No. 02-0184.

Respectfully submitted,

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Date: January 13, 2003

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231

on January 13, 2003
(Date of Deposit)

Antoinette Sullo
(Typed or Printed Name of Person Mailing Correspondence)

Antoinette Sullo
Signature

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